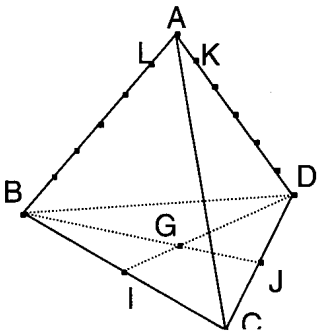

$5\overrightarrow{KA}+\overrightarrow{KD}=\vec{0}$

$\overrightarrow{AL}=\frac{1}{6}\overrightarrow{AB}$

$(A,\overrightarrow{AB},\overrightarrow{AC},\overrightarrow{AD})$: repère de (ξ)

1) A(0,0,0) ; B(1,0,0) ; c(0,1,0) ; D(0,0,1)

$\overrightarrow{GB}+\overrightarrow{GC}+\overrightarrow{GD}=\vec{0}$

$\Rightarrow(\overrightarrow{GA}+\overrightarrow{AB})+(\overrightarrow{GA}+\overrightarrow{AC})+(\overrightarrow{GA}+\overrightarrow{AD})=\vec{0}$

$\Rightarrow 3\overrightarrow{AG}=\overrightarrow{AB}+\overrightarrow{AC}+\overrightarrow{AD}$

$\Rightarrow \overrightarrow{AG}=\frac{1}{3}\overrightarrow{AB}+\frac{1}{3}\overrightarrow{AC}+\frac{1}{3}\overrightarrow{AD}$

d'où $G(\frac{1}{3},\frac{1}{3},\frac{1}{3})$

I=B*C $\Rightarrow$ $I(\frac{1}{2},\frac{1}{2},0)$

J=C*D $\Rightarrow$ $J(0,\frac{1}{2},\frac{1}{2})$

* $5\overrightarrow{KA}+\overrightarrow{KD}=\vec{0}\Rightarrow 5\overrightarrow{KA}+\overrightarrow{KA}+\overrightarrow{AD}=\vec{0}$

$\Rightarrow 6\overrightarrow{AK}=\overrightarrow{AD}\Rightarrow\overrightarrow{AK}=\frac{1}{6}\overrightarrow{AD}$

d'où $K(0,0,\frac{1}{6})$

* $\overrightarrow{AL}=\frac{1}{6}\overrightarrow{AB}\Rightarrow L(\frac{1}{6},0,0)$

2)* $K(0,0,\frac{1}{6})$; $\overrightarrow{KI}\begin{pmatrix}1/2\\1/2\\-1/6\end{pmatrix}$

d'où (IK): $\begin{cases}x=\frac{1}{2}\alpha\\y=\frac{1}{2}\alpha\\z=\frac{1}{6}-\frac{1}{6}\alpha\end{cases}$ $\alpha\in\mathbb{R}$

*

$L(\frac{1}{6},0,0)$; $\overrightarrow{LJ}\begin{pmatrix}-1/6\\1/2\\1/2\end{pmatrix}$; $d'ou(LJ):\begin{cases}x=\frac{1}{6}-\frac{1}{6}\beta\\y=\frac{1}{2}\beta\\z=\frac{1}{2}\beta\end{cases}$ $\beta\in IR$

*** (AG) :** $\begin{cases}x=\frac{1}{3}\gamma\\y=\frac{1}{3}\gamma\\z=\frac{1}{3}\gamma\end{cases}$ $(\gamma\in IR)$

3) M(x,y,z)∈(LJ)∩(AG)⇔ $\begin{cases}x=\frac{1}{3}\gamma\\y=\frac{1}{3}\gamma\\z=\frac{1}{3}\gamma\\\frac{1}{6}-\frac{1}{6}\beta=\frac{1}{3}\gamma\\\frac{1}{2}\beta=\frac{1}{3}\gamma\end{cases}$

Qarray.tn -Aqra Blech- Qarray.tn